



AUC

Alberta Utilities Commission

**Alberta Electric System Operator
Needs Identification Document
Halkirk Wind Connection**

**ATCO Electric Ltd.
Facility Application
Halkirk to Tinchebray Transmission Project**

February 28, 2012

The Alberta Utilities Commission

Decision 2012-053:

Alberta Electric System Operator

Needs Identification Document

Halkirk Wind Connection

Application No. 1607024

ATCO Electric Ltd.

Facility Application

Halkirk to Tinchebray Transmission Project

Application No. 1607065

Proceeding ID No. 1092

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Applications No. 1607024 and No. 1607065
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1 Introduction

1. The Alberta Electric System Operator (AESO), by Application No. 1607024 registered on February 11, 2011, requested approval of a needs identification document (NID) pursuant to Section 34 of the *Electric Utilities Act* (the NID approval application). The NID is for the development of a new 240-kilovolt (kV) switching station and transmission line to connect the Halkirk 615S substation to the Alberta Interconnected Electric System near Halkirk, Alberta.

2. Capital Power Corporation, the owner of the Halkirk wind project, which includes the Halkirk 615S substation, holds Permit and Licence No. [U2011-345](#)¹ to operate the Halkirk 615S substation. The Halkirk wind project consists of 83 wind turbines, each rated at 1.8 megawatts (MW) with a total generating capacity of 150 MW.

3. Pursuant to subsection 35(1) of the *Electric Utilities Act*, the AESO directed ATCO Electric Ltd. (ATCO) to prepare a proposal for the solution to meet the need identified in the NID.

4. ATCO is the transmission facility owner in this area and has applied to the Alberta Utilities Commission (AUC or the Commission) for approval to construct facilities (collectively referred to as the project) to meet the need identified in the AESO's NID as noted above.

5. ATCO, by Application No. 1607065 registered on February 28, 2011 (the facility application), requested approval pursuant to sections 14, 15 and 18 of the *Hydro and Electric Energy Act*, to:

- Construct a new 240-kV switching station designated as Tinchebray 972S substation.
- Construct approximately 12 kilometres of new 240-kV transmission line designated as 9L93 from Halkirk 615S substation to the Tinchebray 972S substation.
- Alter existing 240-kV transmission line 9L59, which presently exists from Cordel 755S substation to Anderson 801S substation, by re-terminating the transmission line at the proposed Tinchebray 972S substation.

¹ Substation Permit and Licence No. U2011-345, Application No. 1607678, Proceeding ID No. 1462, October 7, 2011.

- Operate existing 240-kV transmission line 9L59 between Cordel 755S substation and Tinchebray 972S substation as 240-kV transmission line designated as 9L16.
- Operate existing transmission line 9L59 between Tinchebray 972S substation and Anderson 801S substation as 240-kV transmission line designated as 9L59.
- Connect the proposed 240-kV transmission line 9L93 to the approved Halkirk 615S substation.

6. Tinchebray 972S substation is proposed to be located in the northeast quarter of Section 26, Township 39, Range 15, west of the Fourth Meridian. Halkirk 615S substation is located in the southwest quarter of Section 23, Township 38, Range 15, west of the Fourth Meridian.

7. ATCO made five minor amendments to its application on November 3, 2011, and January 24, 2012, as described below.

2 Discussion

8. The AESO requested that the NID approval application be combined with the facility application for consideration by the Commission in a single process.

9. The Commission determined that this was a proper case for the application of Section 15.4 of the *Hydro and Electric Energy Act*, and consolidated the NID approval application and the facility application under a single proceeding as Proceeding ID No. 1092.

10. The proposed Tinchebray 972S substation would be situated in the County of Paintearth No. 18, 16 kilometres northeast of the village of Halkirk. ATCO requires an approximately 300- metre by 400-metre site for the proposed Tinchebray 972S substation with a fenced area of approximately 110 metres by 155 metres. ATCO has obtained the land from the landowner for the substation site and for the required access.

11. ATCO proposed to construct 12 kilometres of new 240-kV transmission line designated as 9L93, originating from Halkirk 615S substation and extending north to the proposed Tinchebray 972S substation. The proposed route will generally follow a cross-country alignment as shown on the map in Figure 1 at the end of this decision report and will be a standard three-phase design strung on wooden H-frame structures. ATCO indicated that the study area for the proposed transmission line development was determined by the location of the Halkirk 615S substation and potential locations for the Tinchebray 972S substation. Potential substation sites were assessed for access, topography and proximity to the existing 240-kV transmission line 9L59.

12. Routes were investigated to the north and east of the Halkirk substation site. The study area was comprised primarily of privately-owned farm land within the County of Paintearth. The land use in the study area is a combination of cropping and grazing, with oil and gas operations present on most parcels of land. The topography is generally flat to undulating with the exception of the Paintearth Creek valley and some coulees that would be crossed by the proposed transmission line. ATCO indicated that there are no designated environmentally significant areas within the study area.

13. A direct transmission line route was chosen after determining that alternatives did not offer advantages to compensate for additional line length and that the proposed route minimized impact to land and residents.
14. As part of its public consultation program, ATCO contacted all landowners, occupants, agencies and other potentially interested parties in the project study area. ATCO conducted personal consultation with more than 230 landowners and occupants.
15. ATCO also contacted a number of government and industry stakeholders, including Alberta Sustainable Resource Development, Alberta Environment, Alberta Culture and Community Spirit, TELUS, NAV Canada, Transport Canada and the Department of Fisheries and Oceans. None of the agencies had concerns with the project.
16. The Commission issued notice of applications on May 18, 2011. Three interventions were received from local landowners, B. Perreault, T. and K. Turre, and B. Hronek, who reside in the area of the proposed project.
17. Mr. Perreault owns land in the south half of Section 26, Township 39, Range 15, west of the Fourth Meridian which the proposed transmission line crosses and Section 25, Township 39, Range 15, west of the Fourth Meridian, which is adjacent to the proposed Tinchebray 972S substation. He was concerned about property values, environmental issues, the potential location of the Tinchebray 972S substation and noted that he presently has three 240-kV transmission lines on his property.
18. Ms. Hronek own lands in the northeast quarter of Section 10, Township 39, Range 15, west of the Fourth Meridian. Ms. Hronek was concerned about visual impact and property values.
19. The Turrees own lands in the northwest quarter of Section 14, Township 39, Range 15, west of the Fourth Meridian. The Turrees indicated that the proposed transmission line would be located between their quarter sections of land. The Turrees indicated that they have maintained a natural treed wind barrier in this location and did not wish to have it removed.
20. ATCO met with the interveners to discuss their concerns. As a result, ATCO made two minor amendments to the facility application which are set out below:

Amendment 1:

ATCO shifted the centerline of 9L93 in the south half of Section 11 of Township 39, Range 15, west of the Fourth Meridian, approximately 30 metres east to avoid an established shelter belt. This alignment was requested by the Turrees and would have no impact on any other landholders in the area.

Amendment 2:

ATCO indicated that transmission line 9L93 was originally designed to have a cross-country alignment in northeast quarter of Section 26, Township 39, Range 15, west of the Fourth Meridian before entering the Tinchebray 972S substation. ATCO proposed a quarter-line alignment for 9L93 into the Tinchebray 972S substation. This change would reduce the agricultural impact of the line and would remove the need for crossing an access road at the Tinchebray 972S substation. ATCO consulted with Mr. Perreault, who is directly

affected by the change. ATCO indicated that Mr. Perreault and adjacent landowners had no objections or outstanding concerns to this realignment.

21. ATCO also made three additional minor amendments to the application as described below:

Amendment 3:

ATCO determined that monopole corner structures could be used to alter transmission line 9L59 in the vicinity of the Tinchebray 972S substation. These structures are shorter and will have a smaller footprint than the originally proposed steel lattice towers. The affected land owner has been consulted and has no objection to the new design.

Amendment 4:

The Halkirk 915S substation is located midfield in southwest quarter of Section 23, Township 38, Range 15, west of the Fourth Meridian, with the transmission connection point located on the north side. ATCO proposed a cross-country alignment approximately 200 metres to the east of the originally proposed route from Halkirk 915S substation. The landowner who is directly affected by this minor realignment has been consulted regarding the changes and has expressed no objection or concern.

Amendment 5:

ATCO proposed to shift the alignment, in the north-east quarter of Section 22, Township 38, Range 14, west of the Fourth Meridian, eight metres south to increase separation from the township road. This shift is required to locate anchors associated with the corner structure located south of the township road. No objections were received regarding the proposed realignment.

22. As a result of discussions with ATCO and the resulting minor realignments, Mr. Perreault, the Turrens and Ms. Hronek withdrew their objections to the project.

23. ATCO filed a noise impact assessment respecting the Tinchebray 972S substation and stated that anticipated noise levels will be within the permissible sound levels specified in AUC Rule 012: *Noise Control*.

24. ATCO stated that it will construct and maintain the proposed transmission facilities adhering to Alberta Environment's C&R/IL/95-2, *Environmental Protection Guidelines for Electric Transmission Lines*. ATCO submitted a conservation and reclamation document outlining the measures to be taken to reduce environmental impacts of the project.

25. ATCO estimated the cost of the project to be approximately \$18.67 million (+20/-10%), to be allocated as customer cost.

3 Findings

26. The Commission has reviewed the NID application and the facility application filed by the AESO and ATCO, respectively. The Commission finds that both applications meet the requirements stipulated in AUC Rule 007: *Rules Respecting Applications for Power Plants, Substations, Transmission Lines, and Industrial System Designations*.

27. No party filed a submission with respect to the NID application in response to the notice of applications issued by the Commission.

28. With respect to the NID application, as no interested person has demonstrated that the AESO's assessment of the need for the project is technically deficient or approving the NID is not in the public interest, and upon ensuring, based on its own review, that the NID approval application complies with Section 38 of the *Electric Utilities Act Transmission Regulation*, the Commission hereby approves the NID approval application.

29. The Commission finds that the facility application as proposed by ATCO satisfies the need as stated by the AESO.

30. The Commission accepts that the participant involvement program for the applications conducted by the AESO and by ATCO is sufficient and complies with AUC Rule 007: *Rules Respecting Applications for Power Plants, Substations, Transmission Lines, and Industrial System Designations*. As a result of discussions with ATCO, regarding the facilities as applied for and the resulting minor realignments, Mr. Perreault, the Turrens and Ms. Hronek withdrew their objection to the project.

31. The Commission finds that the noise impact assessment submitted by ATCO fulfills the requirements of AUC Rule 012: *Noise Control*.

32. The Commission finds that the project will not have a significant impact on the environment and accepts the evidence provided by ATCO in its conservation and reclamation document that the impacts that may occur can be successfully mitigated.

33. Having considered all of the evidence before it, the Commission finds the proposed project to be in the public interest having regard to the social and economic effects of the project and the effects of the project on the environment, in accordance with Section 17 of the *Alberta Utilities Commission Act*.

34. ATCO proposed to connect the 240-kV transmission line 9L93 to the approved Capital Power Corporation Halkirk 615S substation. ATCO is required to conduct online tests to demonstrate the ability of the Capital Power Corporation Plant (Approval No U2011-344²) to provide continuous reactive power and the ability to ride through low-voltage system conditions to comply with AESO's Wind Power Facility Technical requirements. The test results should be filed with the Commission within 30-days following suitable wind speed conditions to conduct the required test.

35. Until such time as ATCO completes the testing, the Commission will issue a temporary connection order. ATCO may apply for a permanent connection order once it has filed the test results.

36. The Commission approves the facility application pursuant to sections 14, 15, 18 and 19 of the *Hydro and Electric Energy Act*.

² Power Plant Approval No. U2011-344, Application No. 1607678, Proceeding ID No. 1462, October 7, 2011.

4 Decision

37. Pursuant to sections 14, 15, 18 and 19 of the *Hydro and Electric Energy Act* and Section 34 of the *Electric Utilities Act*, the Commission approves the applications and grants the AESO the approval set out in Appendix 1– Needs Identification Document – Approval No. U2012-70 – February 28, 2012; and grants ATCO the approvals set out in:

- Appendix 2 – Tinchebray substation – Permit and Licence No. U2012-43 – February 28, 2012.
- Appendix 3 – Transmission line 9L16 – Permit and Licence No. U2012-46 – February 28, 2012.
- Appendix 4 – Transmission line 9L93 – Permit and Licence No. U2012-44 – February 28, 2012.
- Appendix 5 – Transmission line 9L59 – Permit and Licence No. U2012-45 – February 28, 2012.
- Appendix 6 – Halkirk Wind connection – Temporary Connection Order No. U2012-42 – February 28, 2012.

38. Appendices 1, 2, 3, 4, 5 and 6 will be distributed separately.

Dated on February 28, 2012.

The Alberta Utilities Commission

(original signed by)

Willie Grieve, QC
Chair

Figure 1

